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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/811,368

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Keith P. Thompson

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01/07/2009

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EXAMINER

MAI, HUY KIM

ART UNIT

PAPER NUMBER

2873

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/811,368	<b>Applicant(s)</b> THOMPSON ET AL.	
	<b>Examiner</b> Huy K. Mai	<b>Art Unit</b> 2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-135 is/are pending in the application.
- 4a) Of the above claim(s) 7-12 and 84-135 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 13-83 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Whether Dai et al Reference Being a Prior Art*

1. The applicant's attached exhibit A cannot be a formal document to swear behind the Dai et al reference under 37 CFR 1.131. Therefore the Dai et al reference is applicable.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-6, 13-83 are rejected under 35 U.S.C. 102(e) as being anticipated by Dai et al (US 2008/0106698).

Regarding claims 13-14 and 50-73, Dai et al, Figs. 3, 9C-13, 18C-24, discloses a device for establishing an optical surface shape (or presbyopia correction) *based on the residual accommodation range and pupil size range of the patient* when the patient gazes at different viewing conditions (see paragraphs [0015], [0070], [0141], [0142], [0148], [0231] and [0232]). The residual accommodation range and pupil size range convert into the optical surface shape by using the goal function including the Zernike polynomials. As understood in the art that the residual accommodation range is nothing more than an aberration error and/or wavefront errors and/or wavefront data. Thus, Dai et al's teachings of gazing at different viewing conditions in measuring the pupil sizes, the residual accommodation range provides an effects of the neurological pathways between the eye and the brain. Thus the Dai et al's teachings of the

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effects of the neurological pathways between the eye and the brain and the wavefront error and/or wavefront data are within the meaning of neuro-ocular wavefront data as the applicant clearly defined in the response dated February 15, 2008.

Further, the Dai et al's device including a module and/or an optimizer for establishing the presbyopia correction via a Goal function including Zernike polynomials being expressed in term of an equation including coefficients a, b, c, d, e, and f (see page 8 [0097]). These coefficients in combine with the input patient parameters are nothing more than correlating means as the applicant claimed.

Establish an optical surface shape is nothing more than "obtain neuro-ocular wavefront data" as the applicant claimed. Further Dai et al (page 5, [0070]) discloses that "the present invention will often take advantage of the fact that the eye changes in viewing distance". It is clear that obtain the neuro-ocular wavefront data via MTF in combine with the interactivity of patient via "the fact that the eye changes in viewing distance". In another word, Dai et al discloses interactively obtaining means.

In response to the previous rejections, the applicant argues that "Dai does not teach or suggest "obtaining neuro-ocular wavefront data"" and concludes "Applicants respectfully submit that independent claim 13 is allowable for at least the reason that Dai fails to disclose, teach, or suggest at least the features recited and emphasized above in claim 13". However the applicant does not demonstrate how his broadly claimed invention patentably distinct from the Dai et al reference. Although Dai et al does not mention the word "neuro-ocular", the applicant neither demonstrate the reasons why the Dai et al's wavefront error or wavefront data cannot be a "neuro-ocular" wavefront data, nor indicate Dai et al's neuro-ocular wavefront data being a

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“raw” unmodified neuro-ocular wavefront data, nor analyze the Dai et al’s gazing the different viewing conditions cannot provide the effects of the neurological pathways between the eye and the brain in obtaining the wavefront data as the applicant’s defined in the response dated February 15, 2008. In another words, the applicant does not point out the patentable feature in his broadly claimed invention distinct from the Dai et al’s reference.

In fact, Dai et al discloses a neuro-ocular wavefront data as discussed above and the gazing at different viewing conditions in measuring the pupil sizes, the residual accommodation range provides an effects of the neurological pathways between the eye and the brain as the same as the applicant’s. It is agreed that the Dai et al does not pupil sampling maps/matrix in a refractometer adapted to acquire neuro-ocular wavefront data. However the applicant does not prove that pupil-sampling maps is only way to acquire neuro-ocular wavefront data. A neuro-ocular wavefront data can be obtained without pupil-sampling maps as disclosed by Dai et al as discussed above. In another words, the broadly claimed invention is disclosed by Dai et al under 35 USC 102.

Regarding claims 13, 59, since the optical surface shape is calculated from the coefficients in combine with the input patient parameters, the Dai et al programmable device including means for calculating the correction factors for treating the patient.

Regarding claims 60-63, Dai et al ([0023], [0093]) discloses the correction factors is used to treat the patient with a contact lens, a spectacle lens or a tissue ablation profile for refractive surgery. The refractive surgical techniques such as PRK, LASIK, LASEK. (See para [0068].)

Regarding the method claims 1-6 and 17-49, it should be noted that although claims 1-6 and 17-49 “method claims”, the method steps consist of the broad steps of “obtaining” and

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“correlating” etc and therefore these steps would be inherently satisfied by the apparatus of the Dai et al reference.

Regarding claims 15 -16 and 74-73, since Dai et al’s invention including a module and/or optimizer and/or a programmable device wherein the programmable device for obtaining neuron-ocular data and correlating the neuron-ocular to the patient parameter. The programmable device including instruction in establishing the presbyopia correction. The programmable device inherently includes computer-readable code medium for optimizing the presbyopia correction. Thus the Dai et al’s computer-readable code medium including computer-readable code adapted to instruct a programmable device to interactively obtain neuro-ocular wavefront data from a subject, and computer-readable code adapted to instruct a programmable device to correlate the neuro-ocular wavefront data to parameters associated with the visual system of the subject.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy Mai whose telephone number is (571) 272-2334. The examiner can normally be reached on M-F (8:00 a.m.-4:30 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Ricky L. Mack can be reached on (571) 272-2333. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1562.

/Huy Mai/  
Primary Examiner, Art Unit 2873

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HKM

Jan. 3, 2009